

F (Marine Engineering) of this chapter as determined necessary by the cognizant OCMI.

(c) Auxiliary boilers and heating boilers and their associated piping and fittings will be given separate consideration and must meet the applicable requirements of subchapter F (Marine Engineering) of this chapter as determined necessary by the cognizant OCMI, except that heating boilers must be tested or examined every three years.

§ 119.320 Water heaters.

(a) A water heater must meet the requirements of Parts 52 and 63 in subchapter F of this chapter if rated at more than 689 kPa (100 psig) or 121° C (250° F).

(b) A water heater must meet the requirements of Parts 53 and 63 in subchapter F of this chapter if rated at not more than 689 kPa (100 psig) and 121° C (250° F), except that an electric water heater is also acceptable if it:

(1) Has a capacity of not more than 454 liters (120 gallons);

(2) Has a heat input of not more than 58.6 kilowatts (200,000 Btu per hour);

(3) Is listed by Underwriters Laboratories (UL) under UL 174, "Household Electric Storage Tank Water Heaters," UL 1453, "Electric Booster and Commercial Storage Tank Water Heaters," or other standard specified by the Commandant; and

(4) Is protected by a pressure-temperature relief device.

(c) A water heater must be installed and secured from rolling by straps or other devices to the satisfaction of the cognizant OCMI.

§ 119.330 Pressure vessels.

All unfired pressure vessels must be installed to the satisfaction of the cognizant OCMI. The design, construction, and original testing of such unfired pressure vessels must meet the applicable requirements of subchapter F (Marine Engineering) of this chapter.

Subpart D—Specific Machinery Requirements

§ 119.400 Applicability.

(a) This subpart applies to all propulsion and auxiliary machinery installa-

tions of the internal combustion piston type.

(b) Where no specific fuel designation exists, the requirements of this subpart are applicable to all types of fuels and machinery.

§ 119.405 Fuel restrictions.

The use of a fuel, other than diesel fuel, as an alternative fuel for an internal combustion engine, except gasoline when used as a fuel for outboard motors as allowed by § 119.458 of this part, will be reviewed on a case-by-case basis by Commandant.

§ 119.410 General requirements.

(a) Each starting motor, generator, and spark producing device must be mounted as high above the bilges as practicable.

(b) Gauges to indicate engine revolutions per minute (RPM), jacket water discharge temperature, and lubricating oil pressure must be provided for all propulsion engines installed in the vessel. The gauges must be readily visible at the operating station.

(c) In systems and applications where flexible hoses are permitted to be clamped:

(1) Double hose clamping is required on each end of the hose, where practicable, except that one hose clamp can be used if the pipe ends are expanded or beaded to provide a positive stop against hose slippage;

(2) The clamps must be of a corrosion resistant metallic material; and

(3) The clamps must not depend on spring tension for their holding power.

§ 119.420 Engine cooling.

(a) Except as otherwise provided in paragraph (b) of this section, all engines must be water cooled and meet the requirements of this paragraph.

(1) The engine head, block, and exhaust manifold must be water jacketed and cooled by water from a pump that operates whenever the engine is operating.

(2) A suitable hull strainer must be installed in the circulating raw water intake line of an engine cooling water system.

(3) A closed fresh water system may be used to cool the engine.